

D202.13:36/6

DECEMBER 1990



approach

The Naval Aviation Safety Review



Guest Editorial

Procedures, Procedures, Procedures!

By Lt. C.M. Lipphardt



I was lucky today. It wasn't a real fire. Everyone evacuated with no injuries —no thanks to me. In spite of all my NATOPS reviews, I missed a step in the procedures for "engine fire on deck after 60 percent rpm."

I tried to do too much at once, brief a new pilot and research carrying explosives. There wasn't enough time to do either task well.

We were just about to taxi when I briefed the crew on the explosives.

"If the cargo starts to smoke or spark, open the ramp and toss it out." Then I put on my gloves. I haven't worn gloves since T-44s, more than four years ago. I began the turn onto the taxiway when out of the corner of my eye, I saw the port-engine fire light! I jammed on the brakes.

"We have a fire! Get out!" I yelled.

The ground plane captain was confused for only a second. She sent someone to call the fire department. Although we always brief for the copilot to handle communications, I didn't wait for him, and called ground, then base. By this time, my copilot was reaching for the port emergency-secure handle — just as I did. Then ground asked if we really had an emergency.

"Yes, ground, we have an engine fire!"

I looked back to see the crew running out of the C-2. Just as I was about to tell my copilot to go out the ramp, I remembered

stressing that we should use the overhead hatches during a fire to prevent getting caught up inside the plane.

"Go out the top!" I said as I pulled the other T-handle. We slid down the right side of the fuselage, away from the fire.

People were running toward me as I ran from the aircraft.

"Stay away!" I called, "It's got explosives in it!"

Ninety seconds after the first call, the fire trucks arrived. I was a little dazed as I walked into Maintenance Control to sort things out. It was then I realized I hadn't pushed the extinguisher button.

I could give excuses like I was interrupted by ground control or that the fire light I saw last week was only a bad wire. But that would be lying. I just didn't do it right.

To top things off, I finally got into the NAVSUP 505 manual only to find that Class B explosives should be loaded in a special area and that I was required to have a parachute. The explosives were loaded on the flight line with other planes turning. Our chutes were stored snugly in the paraloft.

I'm a senior aircraft commander. I'm even more embarrassed because I am also the NATOPS Officer. I've been harping on procedures, procedures, procedures since I took over a few months ago.

Today I was lucky; there won't be a next time.

Lt. Lipphardt is a C-2 pilot with VRC-40.

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Approach is a monthly publication published by the Commander, Naval Safety Center.
Address comments, contributions and questions about distribution and reprints to:
Commander, Naval Safety Center
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Telephone: Commercial 804-444-7416; Autovon 564-7416

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POSTMASTER: Send address changes to APPROACH Magazine, Naval Safety Center, NAS Norfolk, VA 23511-5796.



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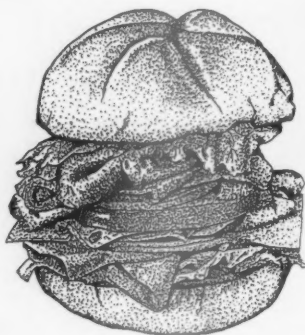


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McFAT

—You Deserve a Break Today! or Fast Food, What's In It For You, Sailor?

By Peter Mersky



J03 Oscar Scott



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TODAY's Navy prides itself on being more aware of health requirements, on being leaner and more fit. Flight surgeons, especially, are more knowledgeable about what it takes to keep aircrews healthy and trim. Flight docs monitor their squadron charges for weight standards, lecture about increasing individual G tolerance, and warn about booming all night when you have an early morning brief.

Yes, the Navy and *all* the military services have come a long way in health awareness. For instance, according to the Navy Food Service Systems Office in Washington, consumption of low-fat milk in general messes in the U.S. has risen to 83 percent of all milk consumed. For GMs afloat and GMs overseas, the figures are 65 percent and 49 percent, respectively.

General messes are also using vegetable oils for deep-fry cooking. Vegetable oils do not have cholesterol.

Yet, anyone visiting, or working on, a Navy base today will find at least one or two — NAS/NOB Norfolk has *three* — representatives of the fast-food industry with their uniquely

Peter Mersky



Peter Mersky



American style of burgers, chicken, or fish sandwiches and breakfast bombs. While the industry has begun to respond to consumer-group claims against the nutritional value of these fried-in-oil concoctions, the fact is that the burgers, egg-and-sausage sandwiches, and chicken-in-a-bun specialties hold more than their fair share of problem ingredients and by-products.

McDonalds recently publicized its change to vegetable oil, following Burger King and Wendy's. McDonald's traditionally popular fries got their high-rated flavor from the chain's practice of frying the potatoes in oil containing beef tallow, high in cholesterol and saturated fat. Hardee's has also switched.

Most people who are concerned about their health, including many people in the Navy, have heard about cholesterol and the value of keeping it in check. (See "What's Your Count," an article about cholesterol, in the September 1988 issue of *Approach*.) They know about fat, calories and sodium, and the effect all of these have on their hearts. Flight crews are particularly well-educated on eating right.

As lunchtime rolls around, however, the base's fast-food restaurants happily contend with long lines of sailors and Marines buying hamburgers, cheeseburgers and fried chicken "pieces." (To quote a TV ad of a few years ago, "Parts is parts!")

"Ahhh-h, I'll work out later," a diner responds, defensively. Or, "I'll play a fast game of racquet-ball after work and that'll take care of this stuff. Don't bother me. I'm hungry!"

Sure, when you're 19 or 20, your body accepts a lot more abuse and regenerates itself more quickly. But, by the time you reach 30, your body has begun slowing down and you need to take better care of it.

Whether you're an O-2 or O-5, an E-3 or E-8, you should be aware of the limited advantages of a fast-food breakfast or lunch, especially if you are on flight status. Visiting a burger barn at 1130 before your 1330 launch might fill your stomach, but in the long term, it makes your body suffer.

What are your concerns about eating fast food - cholesterol, fat, sodium? In the excessive amounts that Americans consume these usually natural components, the regular daily diet can become a series of bullets fired directly down the throat and into the bloodstream.

Assuming that you know that blood cholesterol can build up, clog your arteries and increase your heart's workload, increasing your chances for a heart attack, do you know that the recommended daily intake for cholesterol is 300 mg? Many Americans consume at least 350-400 mg of cholesterol every day, even more. A Big Mac contains 103 mg of cholesterol, one-third of the daily allowance in just one, relatively small item of food. It also has nearly 1,000 mg of sodium, also one-third the daily allowance.

Even with their highly touted switch to vegetable oil, the chains' offerings still have tremendous problems. Take breakfast, for instance. Nothing like a bacon-and-egg sandwich, right? Maybe a sausage-egg-and-cheese combo? Well, a Burger King Croissan'wich with bacon, egg and cheese includes 227 mg of cholesterol, as well as 361 calories. Change the bacon to sausage and you raise the count to 268 mg and 534. Hardee's steak-and-egg biscuit has 175 mg of cholesterol and 550 calories.

Good old McDonald's popular Egg McMuffin (which started the whole breakfast-sandwich fad) includes a whopping 226 mg of cholesterol and 290 calories. And if you want the really big breakfast at Chez Mac's, the scrambled egg

thing, you can ring the bell with 399 mg of heart-stopping cholesterol, well over the daily allowance.

We haven't even covered sodium content. The body needs salt, but not in the vast quantities many Americans eat every day. Ever watch someone as they reach for the salt, almost by reflex, and pump shake after shake onto their already seasoned meal? Too much salt raises your blood pressure – makes it go sky-high – and increases the workload imposed on your heart. Salt retains water and makes you gain weight, again with nothing good for your heart, to say nothing of how you look.

Sodium is one account where the fast-food chains are incredibly overdrawn. For instance, the breakfast sandwiches can contain 800-1,000 mg of sodium. A fairly benign chicken sandwich – the BK Chicken Sandwich, for example – carries 1,417 mg of salt. A Double-Whopper cheeseburger has 1,245 mg of salt, and, oh yes, 935 calories wrapped around 194 mg of cholesterol. Hardee's country ham biscuit contains 1,550 mg of sodium.

One interesting note is that whatever your calorie count each day, you should only have one mg of sodium per calorie. Thus, if you're on a 1,500-calorie diet, you shouldn't have more than 1,500 mg of sodium. One of those great breakfast bombs takes care of your complete sodium allowance, doesn't it?

What about the all-inclusive category: fat? There are three different types of dietary fat: saturated, polyunsaturated, and monosaturated. Saturated fats are bad. They come mainly from animals and are found in such foods as butter and lard (which until recently formed the base for McDonald's frying oil). Polyunsaturated fats are more beneficial and don't clog arteries. This "good" fat comes in liquid corn, sunflower or safflower oil and can, some people believe, reduce your cholesterol count. (Liquid oils are much better than "hard" forms, mainly stick margarines which, according to some dieticians, have little advantages over butter. The whipped margarines are better for you; the softer the form, the better.) Monosaturated fat, found in olive oil, is a neutral type, neither good or bad, but it may reduce your cholesterol count.

The important thing to remember about fats is that no matter what the type, they are all high in calories and should be consumed sparingly when possible, such as small amounts of salad oil or while cooking. Remember that one gram of fat contains nine calories. *Consumer Reports Magazine* (Jun '88) concluded that fast food didn't supply enough vitamins and minerals to justify its high calorie count.

See Figure 1 for how the fast-food chains check out in the fat category. An interesting formula for fat content is that each category – saturated, polyunsaturated, and

monosaturated – should be 10 percent of the total fat count. So, if a sandwich contains 30 total grams of fat, each of the three categories should be no more than 10 grams. The American diet contains, by a wide margin, too much fat, anyway, and by checking the figures here, you can see for yourself how bad some of these foods are. Makes you stop and think, doesn't it? It should.

Here are a few suggestions about eating fast food.

– Go easy on french fries. Order a plain potato at Wendy's. Actually, sour cream is better than butter, because it has less fat and less calories. Mainly, hold the butter on your potatoes, and go light on the cheese topping. Even a moderate amount of *chili* is better than butter.

– Drink lowfat milk, if available, rather than milkshakes.

– Eat a salad, but reduce the croutons, bacon bits and fatty dressings.

– If you have to eat a hamburger, hold the cheese and mayonnaise. Mayo can add nearly 200 calories to the sandwich.

– Roast beef is better than hamburger. It is leaner and usually has more flavor than a fried burger. If you use tomatoes and lettuce from so-called fixins' or salad bars, you can add nutritional value to your sandwich, as well as "build" your sandwich to your own taste.

– Stay away from fried chicken, either as the entree, or in a sandwich. Discard the breading when possible. Breading and frying adds more fat to the sandwich. And make sure the chicken is properly and thoroughly cooked. Return the sandwich if the meat is cold or pink.

Yes, people are more conscious of healthy eating habits, but take a look at some of the numbers in your favorite sandwiches and fast food.

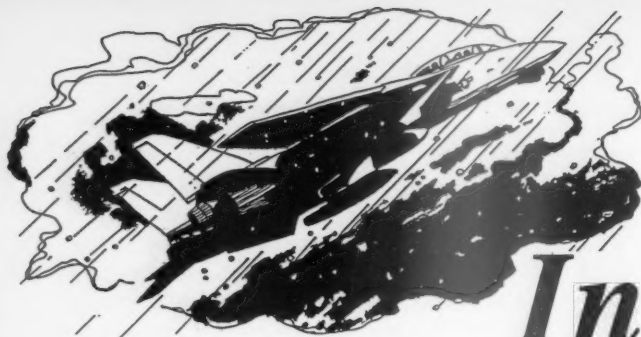
Thanks to Caren Frigge, Registered Dietician, and Director of the SENTARA Weight Management Program in Norfolk, Virginia, for her help.



Figure 1. Selected Nutritional Values of Popular Fast-Food Items*

	Calories	Total	Saturated	Mono-saturated	Polyun-saturated	Cholesterol (Mg.)	Sodium (Mg.)
BREAKFAST							
HARDEE'S							
Steak & Egg Biscuit	550	32	8	17	7	175	1370
Big Country Breakfast (Sausage)	850	57	16	31	11	340	1980
BURGER KING							
Croissan'wich with Sausage, Egg and Cheese	534	40	13	20	5	268	985
Scrambled Egg Platter with Bacon	610	39	11	20	7	373	1043
MCDONALD'S							
Bacon, Egg and Cheese Biscuit	440	26.4	8.22	16.14	2.01	253	1230
Scrambled Egg Breakfast	140	9.8	3.33	5.03	1.44	399	290
SANDWICHES							
HARDEE'S							
Quarter-Pound Cheeseburger	500	29	14	12	2	70	1060
Chicken Fillet	370	13	2	4	6	55	1060
Grilled Chicken Sandwich	310	13	2	4	6	55	1060
9-Piece Chicken Stix	310	14	3	6	5	55	1020
BURGER KING							
Double Whopper with Cheese	935	61	24	22	14	194	1245
Chicken Sandwich	685	40	8	11	20	82	1417
BK Broiler Chicken Sandwich	379	18	3	7	8	53	764
WENDY'S							
Big Classic Hamburger	470	25	unavailable	unavailable	unavailable	80	900
Chicken Breast Fillet	380	12	unavailable	unavailable	unavailable	65	700
MCDONALD'S							
Quarter-Pounder with Cheese	520	29.2	11.18	16.25	1.51	118	1150
Filet-O-Fish	440	26.1	5.16	10.22	10.76	50	1030
McChicken Sandwich	490	28.6	5.4	11.5	11.6	42.6	780
SALADS							
HARDEE'S							
Side Salad	20	0	0	0	0	0	15
Chef Salad	240	15	9	1	5	115	930
BURGER KING							
Side Salad	25	0	0	0	0	0	27
Chef Salad	178	9	4	3	1	103	568
MCDONALD'S							
Side Salad	60	3.3	1.45	1.59	0.27	41	85
Chef Salad	230	13.3	5.91	6.52	0.91	128	490
POTATOES							
HARDEE'S							
Hash Rounds	230	14	3	7	4	0	560
Crispy Curls	300	16	3	8	5	0	840
BURGER KING							
French Fries (Medium)	341	20	10	9	4	21	241
Onion Rings	302	17	4	8	4	3	559
WENDY'S							
Stuffed Potato with Cheese	590	34	unavailable	unavailable	unavailable	22	450
MCDONALD'S							
French Fries (Medium)	320	17.1	7.17	9.21	0.70	12	150

*Information obtained from lists offered by individual chain restaurants.



In Your Ear!

By Ltjg. Dan Burbank, USCG

PEOPLE have several ways to detect changes in physical attitude. The eye and the inner ear provide primary information while the skin, joints and muscles give secondary indications. The brain assimilates all this information, compares the various inputs and generates a *perception* of the body's orientation.

The eyes are the most important source of information and transmit a picture of the external world to the brain. The brain uses this picture to judge an aircraft's position, velocity and attitude relative to the ground in VFR conditions. The brain also senses the motion of objects moving across the field of view. In poor visibility, less information is available.

The semicircular canals in the inner ear are actually accelerometers; they sense change in velocity. Therefore, after 10 to 20 seconds of continuous ebb and flow of the inner ear's fluid, the sensation of motion transmitted to the brain can be false. This erroneous feeling may be a major contributor to mishaps involving controlled flight into terrain and departures from controlled flight.

There is also a fixed acceleration threshold below which the semicircular canals in the inner ear cannot sense any rotation at all. This threshold varies but is approximately 2 degrees per second per second. If the rotation is gradual enough, the pilot won't see any change and will develop "the leans."

Insidious Illusions in the Inner Ear

The ear's semicircular canals also control eye movement. Once rotation starts in a given plane, the eyes track in the opposite direction at an equal rate. This movement causes several illusions including the leans, pressure vertigo and coriolis, or cross-coupled illusion.

The leans can be in the same or opposite direction of motion. Each type involves a rotational movement below the threshold of sensitivity for the semicircular canals.

A slow displacement in the roll axis to the left – below the threshold – goes unnoticed by the pilot until he looks at his attitude gyro. His senses never registered the initial displacement but now tell him he is right wing down. The sensation can persist for a long time.

Leans in the same direction occur in much the same way except that the initial displacement is rapid, such as in gusty

conditions. If the plane gradually returns to wings level, the pilot might still think he is leaning in the direction of the initial displacement.

Pressure vertigo is caused by problems in equalizing pressure in the middle ear during climbs and descents. The problem becomes critical when there is a difference between the pressure in the left ear and right ear. The condition usually occurs quickly and produces strong sensations of spinning and blurred vision. Upper respiratory infections complicate the condition by blocking the eustachian tubes, which makes it hard for the pressure to equalize.

The coriolis illusion is started by head movements during rotation. A person sits in a chair that is spinning at a constant rate. As the chair spins to the left, he looks straight ahead. After several seconds, the inner ear no longer registers the rotation.

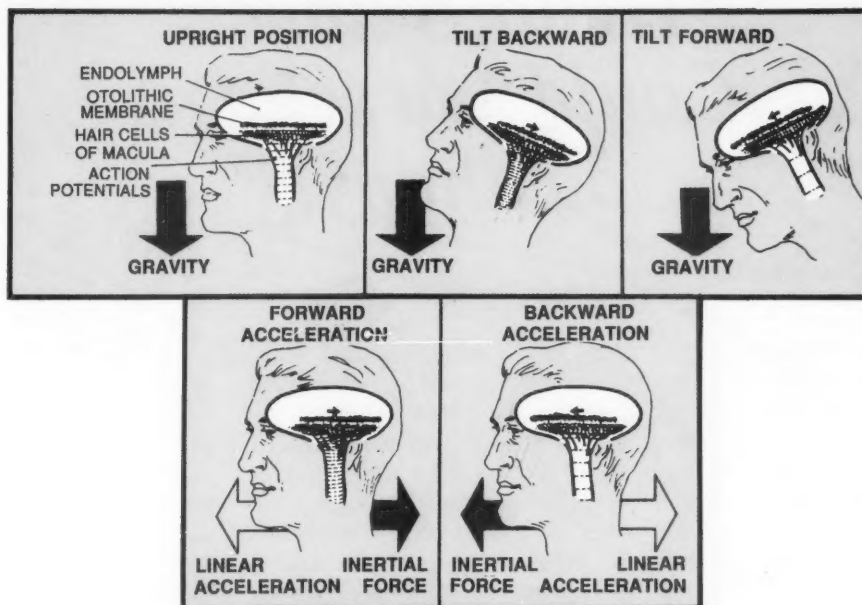
If he rolls his head 90 degrees to the left, the vertical (pitch-sensing) semicircular canal is now in the plane of rotation and senses a sudden, pitchup while the horizontal (yaw-sensing) semicircular canal – in which the inner ear fluid is moving counter-clockwise due to the original rotation – now senses a rotation to the right. What was originally perceived as no rotation at all is now felt to be a pitch up and rotation to the right.

The inner ear contains calcium deposits called otoliths – earstones. Otoliths respond to linear acceleration and gravity. Otoliths also detect the direction of the force of gravity, or in the case of accelerated flight, the direction of the gravity vector and the acceleration vector.

People can't distinguish the acceleration vector from the gravity vector and feel they are descending. This sensation is the basis for somatogyral and somatogравic illusions.

In the case of somatogравic illusion (a false perception of the body tilting from the vertical), acceleration such as that following takeoff produces an inertial component. The pilot will usually lower the nose of his aircraft to reduce the nose-up pitch sensation.

Somatogyral illusions are generated in much the same manner as somatogравic illusions but involve rotational, rather than linear acceleration. A good example of somatogyral illusion is the spin. If the aircraft has been spinning for



Mechanism of action of an otolith organ.

several seconds, the pilot's semicircular canals no longer sense the rotation. His yaw-sensing canal would interpret a recovery as rotation in the opposite direction.

If adequate visual cues are not present to tell the pilot he is no longer spinning, he will tend to make control movements to counteract the false sensation of spinning and he will reenter the spin. Coupled with a possible oculogyral illusion, which causes the eyes to track images opposite to the perceived direction of rotation – a somatogyral illusion in a spin can result in a graveyard spin.

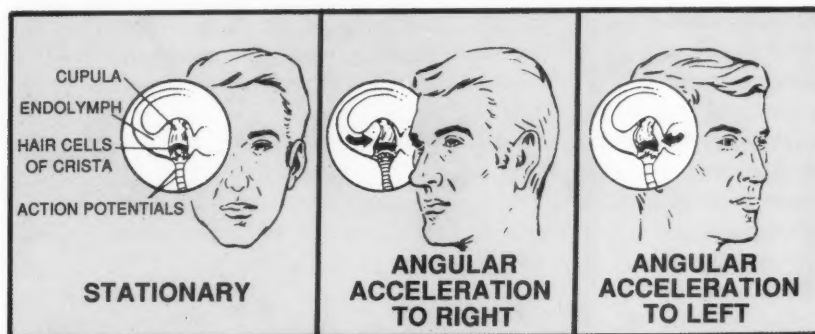
When the Doors of Perception Get Stuck

Spatial disorientation can result from perceptions that aren't related to the eye or ear. Good examples of this type

of illusion are "errors of expectancy" and "coning of attention" (or fascination).

In cases involving errors of expectancy, a pilot receives accurate visual and vestibular information, but past experience and his wishes make him misinterpret the aircraft's attitude. The most notorious case of this illusion is the false-horizon illusion in which sloping cloud banks induce a pilot to roll his aircraft until his wings are parallel with the clouds because he expects the clouds to lie horizontally.

Although not in itself an illusion, fascination can compound disorientation. The pilot becomes deeply involved with one task at the expense of others. He ignores his attitude instruments and places too much trust in his ears and eyes. Ltjg. Burbank is a helicopter pilot at USCGAS Elizabeth City, North Carolina.



Mechanism of action of a semicircular duct.

“Hello, Skipper? Could you send us a canopy?”

By Maj. M.S. Craig, USMC

IT had been an uneventful cross-country, but now we had to return home from the frigid Northwest AFB. It was 25 degrees with a stiff wind that made preflight painful. I soon discovered that three systems needed nitrogen servicing, including the canopy jettison system, a normal requirement when a fair-weather aircraft finds itself in low temperatures.

No problem. Just get the transient line to service the system, and we'll be on our way. Not so fast! The canopy jettison refused to hold pressure. We checked to make sure the people were doing things right. After 30 minutes, it was apparent that something was wrong. We decided to try another hose and fitting.

In the meantime, I discussed the problem with my BN, who was also the squadron Aircraft Maintenance Officer.


“Looks like the same problem this plane had last weekend,” he said. A valve had been replaced, so we blamed the cold weather. The solution was obvious: use a preheater to warm up the valve. Amazingly, it worked and the pressure held. Everything was looking up, but just to make sure, a one-leg flight home seemed prudent.

Much to our disappointment, as we returned to our aircraft, we saw that the pressure was back at zero. It worked once, so let's give servicing one more shot — literally! Soon after we applied pressure we heard a loud explosion. I turned my attention from the nitrogen

cart to the aft end of the aircraft where I saw the canopy neatly perched on the pitot tube and vertical stabilizer.

I have close to 2,000 hours in the A-6 and, as the Safety Officer for three previous squadrons, I thought I had seen most types of A-6 mishaps. I realized what we could have done to prevent this one. Eight years ago, I was in a squadron that had a similar mishap. The mistake made eight years ago came back to haunt me. *The safety pin for the canopy chamber cartridge was*

not installed before servicing! The maintenance manuals emphasize this installation, but it is not mentioned in the aircrew's checklist.

Reinforcing good habit patterns and procedures is a key issue here. Essential items can be left out of procedures because people are unfamiliar with the sequence or because procedures aren't routine. That was the case in my lost-canopy mishap. 

Maj. Craig was the Safety Officer for VMA(AW)-242 and is now the Operations officer for MAG-70.

During preflight, check the canopy air-bottle pressure gauge.





A Little Friendly Competition Never Hurt Anyone

By LCdr. S.W. Litwiller

OUR detachment did not lack for experience. Both the OINC and MO had recently completed WESTPAC-IO deployments, and both held interim jobs in maintenance. The det left in a fully qualified status for a standard WESTPAC-IO deployment. Shortly after departure, the OINC and MO began a "competition." The OINC and MO had already begun comparing notes on night time, landings and instrument approaches.

In the first month, while simulating a patrol-boat contact (40 feet and 40 knots) from the ship, the aircraft descended to 5 feet before the pilots noticed their altitude and corrected. The MO, who was the HAC, continued to fly this low, slow profile past dusk and into night IMC conditions, possibly to demonstrate to himself and others that he was one aggressive pilot.

During the second month, while shorebased, both the OINC and MO flew higher than 10,000 feet around local terrain. In addition to ignoring 3710 restrictions on flying without oxygen at altitude, both pilots noticed indications of blade stall yet repeated the maneuver several times in the following days. They were comparing figures to see which pilot had flown the highest.

Now into the third month, while conducting overland operations, both pilots made landings on unprepared hilltops. These activities were carefully briefed, including correct procedures for mountainous terrain such as LZ evaluation with power checks. Nevertheless, one of the flight crews still managed a gear-up landing. When at sea during this time period, both HACs carefully monitored tactical ex-

ercises to see which crew could claim to be the "A Team."

During the fourth and final month of this competition, one helo was on short final when it lost tail-rotor authority. It spun 2.5 revolutions with nose oscillations of 30 degrees. The aircraft descended from 175 to 100 feet before recovering and departing the area.

The helicopter entered uncontrolled flight as the HAC got on the controls. *An unqualified observer had been trying to shoot an approach!* Although in violation of NATOPS, letting unqualified people fly their aircraft had been just another item of comparison for these two aviators.

As one might hope, this last incident was enough to jolt both pilots into rethinking their activities for the previous months. They realized their competition had caused them to act irresponsibly.

Competition is fine, but when it causes you to lose sight of your true objectives, it's time to reevaluate your priorities.

LCdr. Litwiller is assigned to HSL-31.

Turkey Birdstrike, *or* *What Do We Do With the Leftovers?*

By Cdr. James A. Bolcar



EASTERN Med in the spring: clear days, moderate temperatures, calm winds and steady decks. Great flying weather before the heat of the summer sets in and the "milkbowl" haze arrives. After nearly four months in a dry suit, this was a welcome relief.

Things were going great. We were near the end of the biggest NATO exercise of the deployment. The bombers were smacking the bullseye at Konya target (Turkey), the buddy stores were passing gas, hadn't lost a sortie during the whole exercise (200+), and CAG even smiled at me when we passed in the "dirty shirt." I was truly on a "skipper's high."

As strike lead, I briefed an interdiction sortie against a Turkish airfield some 300 miles inland. We expected opposition from Turkish Air Force F-4s and F-5s, so my triad of A-6Es was escorted by a division of F/A-18s. The brief covered all contingencies, and the tactics were textbook stuff from Strike U.

Kick the tires, light the fires, bombs on target, a few turns with the Hornets, an OK-3, a quick slider, and we'd be ready for our brief as the last night tanker.

We hit the coast-in point on time. Navigation was right on, my wingies were in combat spread behind me, and the Hornets pushed ahead to engage the Turkish CAP. We marked on top the target precisely on time, my wingmen achieved a perfect 30-second interval, and we egressed at the speed of heat (or as fast as a covey of A-6s can go).

Out of the immediate threat area, we throttled back to 420 knots and enjoyed the Turkish countryside at 200 feet. We approached a slight rise in the terrain, and the wingmen took the valleys to the right and left, and I eased over to the right of the crest of the hill.

It was there, traveling south at 420 knots and 200 feet, that we met a section of huge turkey buzzards traveling north at 20 knots and 210 feet. I've read about time compression during a crisis such as an ejection, but I never really experienced it. Luckily, in 18 years of flying, my takeoffs and full stops remained equal. We had less than one second from the time we saw the birds until impact. That one second seemed like 30, and I distinctly remember saying "Oh, ——" to myself as I realized several things.

If I pulled up to avoid the birds I would undoubtedly take one or both of them down one or both intakes. If I dove to avoid them, I'd need full stick deflection forward, and I might die in the process. If I did nothing, I had a 50-50 chance that the windstream would deflect them and maybe I could continue on that skipper's high.

So, I kept it "steady as she goes," but since this article is about a birdstrike, it's obvious that my luck ran out.

Wham! One of the birds struck a glancing blow on the starboard side of the refueling probe. Most of the bird hit the BN's windscreen near the upper center section and the transit glass. For those of you whom God sentenced to a life of support aviation in something other than an A-6, the transit glass is the technical term reserved for that seemingly useless triangular piece of plexiglas that completes the windscreen assembly between the pilot's and BN's windscreens (truthfully, we don't know what it does, either).

To fully appreciate it, you have to experience the flurry of activity that occurs in a small enclosure when approximately 5 pounds of bird guts and feathers swirl around at 420 knots. It's impressive, sort of like being in a gooey pillow fight. We began an immediate controlled climb as I checked the engine instruments for any obvious problems and, we sorted out the cockpit situation. Other than the transit glass, structural damage was contained on the BN's side, with the 1 1/2-inch bulletproof glass shattered, bowed inward and completely translucent due to spider webbing. My BN and I were both OK except for a few lacerations from broken plexiglas. The aircraft seemed fine, just a bit noisy, but the cockpit was a mess. So, after a visual check by our wingmen, we headed back to the ship at 230 knots.

We made it back with no difficulty. We got our sliders, made the last night tanker and ate popcorn that night. No big deal. However, I want to share a few thoughts with you on some "what if's."

What if we hadn't had our visors down and masks on tight? As you can see from the photos, sunglasses and a mask attached to one side of the helmet just wouldn't hack

the program in this situation (the helmet was made by ALPHA Industries, a British firm, and was designed to accommodate night vision goggles). For those of you who wear NVGs, what if this birdstrike had happened at night? Would you be ready to handle it?

What if I had worn my gloves? I probably wouldn't have had to pick three pieces of plexiglas out of my stick hand. What if the bird had gone down the intake? Catastrophic failure of the engine is certain. Would the compressor and turbine rotors have disintegrated and thrown blades indiscriminately through the fuselage?

Would you have been ready to weigh the odds and decide between a single-engine landing at a Turkish airport or trying to make it back to the ship?

What if the bird had hit the wing? Major structural damage is certain. Can you hack a no-flap/no-slat approach to the ship? When is the last time you thought about practicing an approach like that after four months at sea? Isn't that a part of the training and readiness matrix that the Ops O asks you to complete each month?

What if your BN, RIO, ECMO, COTAC, copilot or you were seriously injured? Sure, Jake Grafton can fly an OK-3 at night while applying direct pressure to his BN's jugular, 11 but can you?

What if you're the cruise-experienced BN who gets saddled with the new nugget fresh from the FRS? How much time do you allot to discussion of "what if's"?

We were lucky. We followed the rules and came out on top. People die trying to re-write the rules. Play by the rules, and the odds are on your side.

Cdr. Bolcar was the CO of VA-35 at the time of this incident.



Some people say there is a certain amount of luck in maintaining a good safety record. Nevertheless, you have to be able to recognize when a good situation turns bad and do something about it.



Don't Push Your Luck

By Lt. W.R. Shivell

RECENTLY, my squadron conducted a "Gun Derby," a two-week air-to-air exercise in preparation toward Fightertown's "High Noon" competition. As defending champions, we intended to keep the trophy another year. A Navy-wide safety standdown and Thanksgiving cut five training days out of our already compressed schedule, so we decided to fly through the weekend to make up for lost time. We were the only squadron flying that weekend, and we had the field and the working areas to ourselves. Saturday went fine, but Sunday was a different story.

As the tractor lifted off the runway, a "foul banner" call from the tower told us the banner was still on the runway. The tractor pilot thought that the banner and cable had separated, but the escort pilot said he couldn't see anything hanging from the tow plane.

The tower cleared the tractor downwind, and the tow plane set up to land on the left runway; the right was closed while crews recovered the banner. Suddenly, one of our aircrew in the hold-short saw a fast-moving dust trail in the approach overrun immediately behind the tractor. They called for the tractor to wave off; the banner cable was still attached!

On the wave-off, the cable took out several approach lights and damaged the approach-end arresting-gear cable. The tractor flew toward the banner drop zone beside the left runway. The tower said that a field truck was near the left runway overrun. Both the tow plane and his escort saw the truck, and after the tractor seemed clear, the tower called for release.

The tractor came around again, landed, went through the fuel pits to top off, then proceeded to the hold-short for another try. Meanwhile, the ordies were preparing a second banner for hookup. The tractor again went through the hookup procedures, but again, we heard a "foul banner" call after he took off. This time, the banner was still attached, but

spinning.

The tractor and escort flew out over the water to check the banner. They chose to return and made an uneventful drop. Again, the tractor came around, landed and went to the fuel pits while the ordies tried a third time.

At this time, the SDO began receiving phone calls from base operations about a banner cable that was dropped on a field truck. It seems that when the tractor dropped the first cable, the end of the cable struck the truck's hood. Aside from a disturbed nap, the driver did not suffer any injuries and didn't report any other damage to his vehicle.

While the tractor refueled for a second time, the pilot saw a strange movement in the airplane. The airman refueling the jet was making strange hand signals, trying to tell the pilot that his aircraft's right main tire was flat. Another pilot in the pits finally radioed the situation.

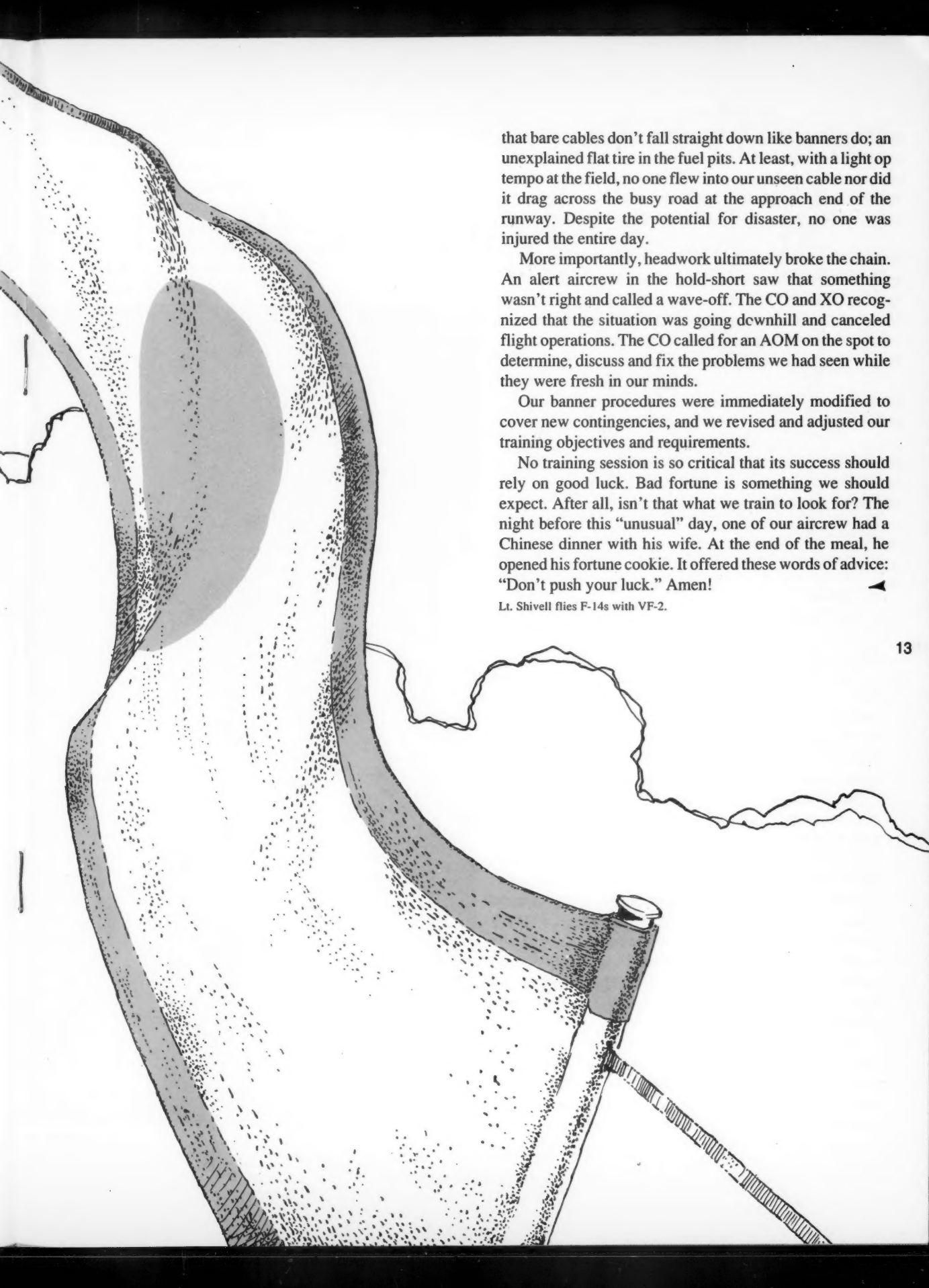
An astonished voice said, "Say that again . . ."

The XO called on base frequency, "Skipper, meet me on TAC."

In the duty office, we couldn't switch to monitor, but their conversation no doubt had something to do with building "chains," and the proverbial "Are you thinking what I'm thinking?" After a few moments, a resigned voice on base frequency said, "Ninety-Nine Bullets from Bullet One, return to the line." As soon as the last aircraft shut down, the CO called an all-aircrew meeting.

Some people say there is a certain amount of luck in maintaining a good safety record. Nevertheless, you have to be able to recognize when a good situation turns bad and do something about it.

We were stuck with a deteriorating situation: two banners in a row after scores of perfect ones; 1,500 feet of unseen steel cable behind an F-14 that could have caused catastrophic damage; a field truck under tower supervision loitering in a hot banner-drop zone; finding out the hard way



that bare cables don't fall straight down like banners do; an unexplained flat tire in the fuel pits. At least, with a light op tempo at the field, no one flew into our unseen cable nor did it drag across the busy road at the approach end of the runway. Despite the potential for disaster, no one was injured the entire day.

More importantly, headwork ultimately broke the chain. An alert aircrew in the hold-short saw that something wasn't right and called a wave-off. The CO and XO recognized that the situation was going downhill and canceled flight operations. The CO called for an AOM on the spot to determine, discuss and fix the problems we had seen while they were fresh in our minds.

Our banner procedures were immediately modified to cover new contingencies, and we revised and adjusted our training objectives and requirements.

No training session is so critical that its success should rely on good luck. Bad fortune is something we should expect. After all, isn't that what we train to look for? The night before this "unusual" day, one of our aircrew had a Chinese dinner with his wife. At the end of the meal, he opened his fortune cookie. It offered these words of advice: "Don't push your luck." Amen! ◀

Lt. Shivell flies F-14s with VF-2.



Nugget's Night in the Barrel

By Lt. Jon Whitten

"NINETY-nine aircraft, working 40 knots axial, four-degree glideslope."

I was just about to push out of marshal on my first night carrier approach as a fleet pilot when I heard that call. What did it mean?

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I was TAD to the squadron, still attached to the RAG, and I wanted to make a good impression. That should have been the least of my worries that night.

I'm sure they discussed the four-degree glideslope in the RAG and how it affected rates of descent and power settings, but it had been three months since my initial carrier qualifications. The weather then had been absolutely perfect with unlimited visibility, a full moon and calm seas. I hadn't understood why anyone would get nervous about a night carrier landing. My CQ had gone great, culminating with outstanding grades, 100 percent boarding rate and a very confident attitude.

My new fleet squadron had recently returned from cruise, so the crews were still acclimated to carrier operations. I was the first new pilot they had received in the turn-around cycle. I felt I was under a lot of pressure as the new guy. It didn't help to have the XO in my back seat.

The flight had gone as briefed, and I was pleased with my performance. The only hurdle left was marshaling and hitting my push point, followed by a CV-1 approach to an OK-3 wire.

The XO hadn't said much to me during the flight. What was he thinking? Had I missed something? Was I doing everything right? Should I be at 250 knots? Am I on the right heading? I told myself to relax and fly the jet and intercept the final bearing. The ILS needles popped up, and I reported



Ltj. Joe Vollbracht

a good bullseye.

It was a rough night. I felt like we were flying through jet wash. To make things worse, there was no moon and no horizon. It was very dark.

"205, expect a six-mile dirty-up," the ship called. Six miles? I'm not going to have enough time to get set up, I thought. In the RAG, I always had at least 10 miles. But, I can handle it; I'm a fleet guy now.

"205, three miles, on glidepath," the controller called, "going above, above glidepath, going right of course."

I was so concerned about the turbulence that I had let the ILS needles drop out of my scan. I over-corrected both the power and heading, which sent me chasing the glideslope and lineup. At two miles, my deviations had not smoothed out, and I felt like I had lost control.

I looked out at the ship to check my lineup. Looking down at that lighted carrier box made me feel very high.

"205, left of course and below glidepath, three-quarters of a mile, call the ball." *The ball looks like it's in the center. I'm not low.*

"205, Tomcat, ball, 8.8" Those were the XO's first words since we left marshal.

"Roger ball, Tomcat," the LSO called, "Don't settle."

Don't settle? I feel high. Just fly the ball. Watch my lineup. I over-controlled my lineup correction to the left and immediately came back to the right.

"Easy with the wings. Power!"

Before I had time to react, I saw the wave-off lights flashing. *They just waved me off! What is the XO thinking?*

I climbed to 1,200 feet and turned downwind. *Boy! My new squadron buds are going to give me hell about that.* I completed the landing checklist and set up for another approach. Approach control hooked me in at three miles. *Extend out to four miles? No, the XO will think I'm a wimp. I can handle it.*

"205, left to the final bearing. Fly your bullseye." *Don't chase the needles this time.* At three miles, I centered the needles and pushed.

I was still having trouble with the turbulence, which was making it extremely difficult to make smooth corrections, especially for lineup. I needed to fly an OK pass this time. I had to make up for that wave-off. At two miles, I looked out at the drop lights to check my lineup. I still felt high. At the time, I didn't realize that a four-degree glideslope created a completely different picture.

I need to get aboard on this pass. The controller told us that we were below glidepath and left of course. At three-quarters of a mile, the XO called the ball.

"Roger ball, Tomcat," the LSO replied, "Don't settle." I started chasing lineup.

"Power." I added a little power. I still felt high, even though the ball was sagging below the datum lights. I couldn't stop chasing lineup.

"Power," the LSO said with a stronger tone. I pushed the throttles forward a little. "Easy with it."

I felt the aircraft flatten out and watched the ball rapidly go off the top. The LSO called, "Attitude" at the ramp, immediately followed by "Bolter, bolter!" I couldn't believe I bolted. *What did he mean by "attitude?" Come on, scan the instruments and concentrate on basic airwork!*

I turned downwind again and went through another landing checklist. The next three passes were carbon copies of the last one. Now abeam, the CAG LSO gave me words of encouragement. *Great! Now, I've got the entire air wing's attention.* After each pass, my scan broke down even more. *Settle down, fly good instruments. I can do it.*

After my fourth bolter, I had thoughts of being grounded, and I began doubting my ability. Come on! Concentrate! Scan the instruments, fly the ball all the way to touchdown!

The CAG LSO told me what I was doing wrong and explained the "attitude" call. I was dropping the nose and flattening out in-close to the ramp, then flying through the glidepath.

My fifth, and trick-or-treat, pass started out like the others. As I crossed the ramp, I heard "Easy with it. Attitude!" The four-wire jerked us to a stop.

As I walked toward the ready room, I didn't know what to expect. A pink sheet? A FNAEB? Hi, Skipper, how do you like me so far?

To my surprise, as I entered, everyone was all smiles, patting me on the back, laughing and joking. What a relief. They had all had their night in the barrel and knew what I had gone through. In a fighter squadron, the peer pressure can be relentless. But, when I was having trouble, everyone went out of their way to take the pressure off.

I remember how concerned I was about making a good impression and about how much attention I was bringing on myself. These worries distracted me and made things worse. When you find yourself in a similar situation, all you have to fall back on are basics. Meatball, lineup, angle-of-attack. Concentrate on basic air work. There's no substitute.

I learned many lessons that night. I shouldn't have accepted a six-mile dirty-up, and a three-mile hook after each pass. I let my instrument scan break down and started trying to fly the ball too far out. In close, dropping my nose caused the attitude to flatten out, guaranteeing a bolter.

The most important lesson was trying to shed the new-guy status too soon. I let self-imposed pressure take me outside my own limitations. I wasn't expected to be a seasoned fleet pilot. I shouldn't have tried to act like one.

Lt. Whitten is an aggressor pilot with VF-43. At the time of this story, he was with VF-84.

What's All the Flap?

By Capt. Chan Floyd, USAF

IT was a routine night SSC mission. We'd been on cruise for four months, knew our procedures, and felt comfortable in our aircraft. We briefed and arrived on deck in time to hear the handler yelling at the nearest unsuspecting plane captain to get to his aircraft. We preflighted and started up.

"Going dirty," I said.

"Thumbs up to the weight board," my BN replied.

"JBD coming down . . . we're taxiing.

"Tension."

I wiped out the cockpit. "Flight controls good. Ready to go?"

"Ready."

"Lights on."

The shot felt normal. Everything was perfect, perfect as greased lightning, something like that.

"Good end speed," my BN noted.

16 "Gear's coming." Well, chalk up another dreaded night cat shot.

As the gear came up, the A-6 started rolling to the left. The asymmetrical load of gas on my left wing was responsible. I returned to wings level. As everything settled down, I reached down to unlock my harness. For some reason, it took two tries. I returned to flying the airplane and immediately noticed that my control stick was getting heavy. Why?

The left wing dipped down and the nose pitched up. I applied more right stick and gave a little nose-down pressure. The jet straightened out, and we leveled off . . . at 150 feet! I quickly decided that something was definitely wrong, especially since we were now several miles from the boat.

The first problem I considered was attitude. I cross-checked the primary and secondary sources with the turn needle, and they were normal.

The Intruder started rolling left again, and the nose pitched up. Now I

used full right rudder and as much right stick as I could with both hands. The stick was still heavy. My heart was racing. My BN was trying to tell me something, and we still were not climbing.

Finally, the roll slowed and then stopped at 15-degrees angle-of-bank, left wing down, and 20-degrees nose up. The angle-of-attack was just less than optimum for landing, and my airspeed was less than 150 KIAS. However, I was still at 150 feet.

My mind raced for the answer to this problem. I scanned the engine instru-



ments, but everything was normal. The reliable J-52s were still running, and all my attitude instruments read OK, too.

After a few more seconds, at about four miles in front of the boat, the jet slowly started to climb and accelerate. We climbed through 700 feet, and the perplexing attitude problem went away. We returned to a wings-level position. The Intruder passed 185 KIAS, and I happily reached for the handle that would retract the flaps and slats. Then it hit me. The handle was already "up!" My wings were clean! The surfaces must have retracted right after launch,

below the minimum recommended airspeed. My heart started racing again. I never realized it; I never once scanned for wing configuration. Now I knew why it took two tries to get my harness to unlock after the shot!

The rest of the night hop went fine in spite of my heart rate. I got a fair pass—so what. After that launch, remaining airborne long enough to even try a recovery seemed a miracle. After recovery, I reviewed the entire situation and came up with these conclusions.

I had reached for the handle to unlock the harness. I'd assumed I'd moved it. I hadn't looked down to see what I had been doing. I had tried a second time to unlock the harness and by luck, moved the right handle. It had never crossed my mind that something else was wrong. Now, instead of immediately trying to unlock my harness, I wait until I complete the launch phase. In other words, I clean up, then take care of minor adjustments, like a locked harness.

I had failed to communicate with my BN. As a result, he had quickly started to think about ejecting because of our unusual attitude and altitude. Even though I had been busy using as much flying skill as I could muster, I still should have told him "I've got it."

My scan has improved since this hop. I recommend watching more than just altitude, airspeed and engine instruments. We aviators are creatures of habit. When something happens, we sometimes react mindlessly. We build and rely on habit patterns from brief to debrief. Occasionally, we sit back and review how we do business and find ways to improve. The danger lies in our habits operating independently without referencing or cross-checking our work. I don't mindlessly unlock my harness anymore, and I've found that it is a lot easier to be a Monday morning quarterback . . . if you're still there on Monday. ◀

Capt. Floyd is an exchange pilot with VA-95. He has logged more than 650 hours and 120 traps on board USS Enterprise (CVN-65).

This Is What I Always Wanted To Do, Right?

By Lt. Fred Butler



THERE I was, like Clint Eastwood sauntering out of the sun, ready to take on anything. I was walking into my first fleet squadron. I had worked hard to get there. My father was a Naval Aviator, and I was proud to follow in his footsteps.

My first flights were FAM and instruments. It took a while to get used to no grading or yelling, and I was learning the personalities of the 20 HACs in the squadron. I began to feel I fit in, that I belonged here.

On my sixth flight I was scheduled to fly with one of the best sticks in the squadron. The SDO simultaneously briefed two events, our hop and another FAM crew's flight. He covered NO-TAMS and weather that might affect our flight. One crew stayed in the briefing room, while the other searched for a vacant office.

After our brief, we checked the ADB, then got our gear and started to walk out to the aircraft. I saw the two HACs walking ahead of me, laughing. I knew I was going to do OK, and figured it

would be a fun hop.

We launched about five minutes after the first crew and headed out to sea to take some photos. We were closing on a "target" when I saw another aircraft at our 9 o'clock, level, at three miles. My HAC told me to dial in a manual frequency that I did not recognize. I continued reporting the traffic while the HAC, somewhat amused, told me the traffic was our squadronmate.

We broke off the photoex and the other helo joined on us. I thought that was good since I had not flown any form since the training command. These guys didn't have to go through a boring half-hour form brief, either. They must really be good.

My HAC told me what to look for and gave me the controls. Great! Fleet pilots doing it the fleet way. During the next 30 minutes, we made several lead changes, left and right turns drifting out of position, then bringing it in tight . . . basic, uncomplicated maneuvers.

Our playmate, flying wing, called that he'd had all the form he could take and made a very impressive breakoff. Five seconds later, we pulled max power and followed him. Although we only pulled 2-3 Gs, I never thought I'd feel anything over 1.3 after primary. We followed our squadronmate's hard jinking turns. He had a slight altitude advantage, but we stayed between his 4 and 8 o'clock.

After a couple of minutes, a thought hit me that this session read like an article out of *Approach*. It didn't take a genius to know unbriefed, unauthor-



ized form and evasive maneuvering – dogfighting – are illegal and dangerous.

Peer pressure was red-lined. I had to belong, right? This guy would never want to fly with me again if I questioned him. What would he tell the other pilots? I cracked the relief valve a little.

"This would make a nice article for *Approach* if anything goes wrong."

He thought about what I said.

"You're right," he replied. "We'll break it off here soon." I relaxed a little and returned to concentrating on keeping us clear.

That night and for the next few days, I thought seriously about what we had done. If someone else had seen us, we might have lost our wings. I should have spoken up sooner.

The HAC did not fly beyond his capabilities nor those of the aircraft. However, the nature of this dirty deed falls squarely in the unsafe area. Safety is an attitude of limiting your exposure to risk and not taking unnecessary risks.

Lt. Butler is a pilot with HSL-35.

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I had plenty of pitch available as I touched down. I had to ease the mainmounts onto the runway so the jet would begin to slow down. The landing seemed fairly normal until the nose eventually fell through.

You Can Pick Your Friends, But You Can't Pick Your Nosegear

By Lt. Fred Lohmann

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I DON'T remember where or when I learned to count the wheels in the landing gear indicators while doing a landing checklist. I *do* recall the time that the habit saved me from landing without my nosegear.

I was 10 miles behind the ship at night, when the controller told me to dirty up. Slowing through gear speed, I dropped the gear and flaps, and set up the cockpit for my approach. I heard the normal thumps when the gear dropped, and felt the change in aircraft attitude. I raised my seat, checked my exterior lighting, and pulled back the HUD combiner glass.

Old habits took over as I started my landing checklist. Everything on the transition seemed normal until I counted the little wheels in the landing-gear indicator. The mainmounts were OK, but the nosegear wasn't. None of the other cockpit indicators – the light in the landing gear handle, or the wheels-flaps warning light – showed that anything was wrong. The nosegear indicator showed up and locked, no doubt about it, no matter how many times I checked it.

I told the controller that I wanted the LSOs to check my gear as I went past on a wave-off. I was lucky in that I was the first one down the pipe that night. The LSOs were up on my frequency and heard my request. The approach was a normal Mode II.

The wave-off lights came on while I neared the middle of the pass. I went to military but held the flight-path marker on the horizon line so I would be in the pattern of the fixed lighting on the flight deck as I went by the LSO platform. I wanted the LSOs to get a good look at my nosewheel.

After I went by the platform, paddles told me to switch to Departure to talk to the rep. Paddles then added that the nosegear doors were open but that there was no landing gear visible. I acknowledged as I climbed into the dark sky. I remained dirty and climbed to 5,000 feet.

A squadronmate who had launched on the event after mine joined on me. The rep advised me to try cycling the landing gear. I raised the handle, but got an unsafe nosegear indication. Then I lowered the gear. Again, the mainmounts were down and locked, but the nosegear remained up.

My wingman confirmed that my nosegear doors were open but the gear was not down. I raised the gear again so I could try to get it down using G. But this method didn't work.

The ship told me to divert to homeplate – just what I wanted to hear. I didn't even want to think about a barricade at night.

My wingman and I started back to Lemoore. I had enough fuel to make the trip as long as there were no unnecessary delays. I called Center. They weren't expect-

ing my call nor did they understand that I needed priority handling because of my near-bingo fuel state. Center wanted me to stay low to avoid traffic. I replied that I needed a higher altitude, right away. Center came back and said he could not get me higher. I finally cleared up the confusion by telling the controller that I was climbing to FL250 and declaring an emergency. After that, Center was very cooperative.

About 70 miles from Lemoore, I switched to the tower and told them about my situation. I told them to strip the short-field arresting gear and that I would need help on the runway. They didn't know I was inbound with any problems but said they'd be ready for me.

During my descent, I kept up my airspeed for one final attempt at freeing the nosegear. I wanted to make a healthy turn as I threw the gear down. My wingman managed to hang on as we descended through a particularly turbulent overcast. The approach controller then dropped another surprise in my lap: The main runway at Lemoore was closed for construction and repairs. We had flown off from there less than two weeks ago, and neither of us knew about the runway closing.

My fuel state was beginning to be more of a factor. I had enough gas for one trip around the pattern. When the controller wanted to vector me farther south to accommodate GCA traffic, my reply was slightly less than profes-



sional. I told him that I was VMC and I would not follow the vector because of low fuel.

"Tell the Hornet to take it into the break," I said.

I was frustrated that people seemed to forget my emergency and decided to get back to business. I lowered the landing gear and got the same indications: mains down and locked, nosegear up. My wingman confirmed the lack of a nosegear. I detached him and he entered the break.

The GCA controller hooked me in on final. I reported my landing checks complete and that I was ready to land. Then he told me to execute a missed approach and contact the tower. As I was switching frequencies, my wingman came over the back radio with some interesting news.

"Fred, I'm afraid I took the long-field gear!" He had forgotten to do a complete landing checklist and had left his hook down. Obviously, he had anticipated landing on the ship. He decided to use all the runway and as little brakes as possible to lessen the chance of blowing a tire. He didn't want to blow a tire while trying to take an early turnoff.

I flew to the upwind end of the runway before turning downwind. Since the crash trucks were already standing by the runway for me, they cleared my wingman from the arresting gear more quickly than usual.

At the abeam position, I called, "Abeam, two down and locked, full stop." The tower couldn't give me clearance to land until the runway was clear. I told them I would land anyway.

"I won't need all the runway," I added. I didn't have the fuel for another circuit. The crash crew had the runway cleared by the time I was in the groove, however, and the tower cleared me to land.

I landed with 15 extra knots. I wanted to have the pitch authority to keep my nose off the runway on touchdown. The A-7 will rock forward on the nosegear during a normal, on-speed landing. I had plenty of pitch available as I touched down. I had to ease the mainmounts onto the runway so the jet would begin to slow down. The landing seemed fairly normal until the nose eventually fell through.

I wanted to ease the nose onto the runway, in a controlled manner. Using normal aerodynamic braking, I usually hold the stick full aft until I stop. That night, I used the last of my available pitch authority to gently set the nose on the runway. As I started to lower the nose, I shut the engine down. I was now committed to landing.

During the flight to Lemoore, I had thought about how everything in the landing sequence would look and feel – except for one thing: how dark the cockpit would get. The

generator dropped off the line just before the intake lip hit the runway. The noise of the lip scraping the concrete surprised me. All the regular cockpit noises went away with the generator. The grinding noise was quite loud, and it made me wonder how many sparks were flying.

I should have had my flashlight pointed at my instruments. Only the airspeed would have been working, but that would have given me something to look at until I got below 80 knots. Runway 32R at Lemoore does not have centerline lighting. My immediate attention quickly focused on how much runway I had on either side of me.

The steady wind blowing right down the runway and residual brake pressure let me keep directional control until the aircraft stopped. More than 5,000 feet of runway remained as I made the fastest cockpit egress of my life. I had no idea if the jet was in one piece, and I wanted to get away from any possible fire.

Once I was safely away, I knew everything was in good shape. There were no fuel leaks (there wasn't much to leak out!) and the Corsair was right on top of the runway centerline.

The field was now closed for the night, about three hours early. I followed the flight surgeon to the base hospital for the standard donation of eight quarts of blood.

The importance of landing checklists is now etched in my mind. I monitor the gear indicators during any transitions to be sure that I catch any unusual situation. There were no indications of a hung gear that night, except for the one up-and-locked indicator. Even the LSOs would have seen their normal sight picture as I approached the ship, until it was too late. The gear doors were open, and a steady approach light showed.

My perception of a lack of urgency on the part of the controllers was my fault. I had the gear and flaps up and locked for the trip to Lemoore, but I didn't perform a strict bingo profile. I finally used the word "emergency" to get what I wanted from the controllers. On the ship, the problem was well known, but I failed to be explicit to the controllers. Explaining my situation the first time would have made things go more smoothly.

The A-7 and I both survived an intentional gear-up landing. Following NATOPS and the PCL removed the chance for the unexpected. My initial instinct was to make an arrested landing at the field. The relative lack of damage to the aircraft and the easy handling on the runway proved NATOPS was right.

Lt. Lohmann is an A-7 pilot with VA-97

Anytime things appear to be going better, chances are you have overlooked something.

Acc L.

“Ummm-m, I Think I’m Sick”

By Lt. Walter Molano

THAT statement will snap any BN out of his peaceful reverie. It’s incredible that I have already heard it twice in my career. I’m not talking about digressions from the “bottle to throttle” rule. I’m talking about what Mother Nature can do to your digestive tract at 20,000 feet. So, what do you do with a sick pilot? Sounds like the old sea chantey “What Do You Do With a Drunken Sailor?”

The first time I heard the complaint, I was halfway through my second cruise. It was a glorious morning, and I was in a KA-6D on the first go. This, in itself, could have been a bad situation if the weather hadn’t been so nice and I knew I had a bombing hop in the afternoon. I was flying with my regular cruise pilot.

We leveled off at the tanker’s altitude and waited for the first group of fighters. Suddenly, the confident voice I had heard throughout the cruise turned mushy.

“Ummm-m, I don’t feel too good.”

At first, I was angry. What did he mean that he didn’t feel too good? I didn’t feel too good, either. Here we were out at sea, three months from the end of the cruise. But I knew he meant something else.

Did he mean we were going to crash? Then I was sorry. The A-6 doesn’t have command ejection, and I knew I felt great. I quickly assessed the situation and realized that I had a sick buddy on my left and hungry fighters arriving on my right. All I could do was “fess up” and tell the Boss. He immediately reduced the fighters’ mission to 1.5 hours of holding and told us to start dumping.

I tried to sound reassuring to my pilot and backed him up on the in-



struments. Fortunately, the problem was nothing worse than a bad batch of milk from Turkey. We recovered safely with nothing but a little bruised ego and little hope of flying for the next few days.

I thought this was a once-in-a-lifetime incident until I found myself two years later in a bomber climbing through 24,000 on a cross-country flight.

“Ummm-m, I think I’m sick,” my pilot moaned.

This was unreal. Maybe I should change my aftershave. I bypassed all the emotions except the last: sorrow for the pilot. I watched in amazement as the flesh of this olympic-class runner turned a sickly shade of green. He hunched forward in his seat and

groaned. It even seemed like his head had shriveled up.

There was nothing I could do except offer “the voice.” A fellow BN in my first squadron had defined it as a deep tone coming from the bottom of your lungs. Most BNs use “the voice” on pitch-black nights as they fly through mountain valleys using SRTC. The voice says, “All is OK. Trust me,” even though you, too, are scared to death.

I declared an emergency, and we were cleared through what seemed every airport traffic control zone on the West Coast. The pilot did a fine job of landing, but he had to be carried from the airplane by the rescue crew. I learned he had eaten a bad batch of Mexican food the night before.

What’s the lesson? Don’t drink Turkish milk or eat Mexican food before you fly? No. All aircrew should discuss incapacitation at some time or another. Have a gameplan ready. If it’s not the pilot who gets sick, the situation is a lot easier to handle since there is no immediate threat to the safety of the aircraft. Here are a few guidelines if the pilot *does* become ill.

1. If you don’t feel good, don’t fly. This sounds obvious, but it is seldom practiced. Everyone knows when something is wrong with them. It is useless to play macho with people’s lives and a multimillion dollar airplane.
2. If you feel sick, confess. Once you’ve gotten sick there is nothing you can do but get as much help as you can quickly.

3. Take everything slow. Analyze your symptoms and your flight conditions. Get on instruments. Try to get on deck ASAP, and *don’t* panic.

4. If possible, take a trap. The less variables, the better.

Lt. Molano is currently attached to the Defense Plant Representative Office, Grumman. He is the Assistant A-6E Program Manager Representative.

Capt. R.A. Carney, USMC
1stLt. K.P. Dyer, USMC
Cpl. A.t. Davila, USMC
HMH-362

Ugly 14 was conducting 25-foot hover and lateral flight checks during a PMCF. While sliding right into the wind, Capt. Carney (HAC) applied left pedal to check for tail-rotor authority. He then tried the right pedal to bring the CH-53D's nose into the wind line. The aircraft entered a 20-degree nose-down attitude and rapidly rotated right. Cpl. Davila (crew chief) saw the first-stage hydraulic pressure gauge drop to zero and told the pilots.

Capt. Carney called for the AFC servos to be secured and broadcast a Mayday to the tower. When the air-

craft kept rotating, he called for the engines to be secured. First Lieutenant Dyer (copilot) complied, and the rotation diminished as the helicopter began to settle toward the ground. Capt. Carney regained limited control and cushioned the landing by increasing collective.

The CH-53D's tail rotor is powered by the first-stage and utility hydraulic systems. The bypass valve in the tail-rotor servo would normally bypass when one system fails. Because the machining hole plug in this valve backed out due to a lack of loc-tite compound, it did not allow the utility system to power the tail-rotor servo.

Capt. Carney, 1stLt. Dyer and Cpl. Davila each received the Navy Achievement Medal.

LCpl. A.T. Chiuena



Capt. Terry Glover, USMC
Capt. Philip Kovach, USMC
HMLA-267

Capt. Glover (PIC) and Capt. Kovach (copilot) flew a fam warmup in an AH-1W and then returned to MCAS Camp Pendelton to practice autorotations. Capt. Kovach flew a normal approach to the right grass area and called for takeoff into the autorotation pattern. The tower told the Cobra to hold for departing traffic.

The crew acknowledged the hold and while in a hover, made a 90-degree, left-pedal turn to see their interval. As the UH-1N cleared the departure end of runway 21, the Cobra crew turned back to the right to line up for takeoff, heading 210 degrees.

Arriving at 210, both pilots heard a loud "pop" from the rear of their aircraft. Almost simultaneously, the



From left to right: Capt. R.A. Carney, Cpl. C. Davila, 1stLt. K.P. Dyer

BRAVO ZULU



Left to right: Capt. Terry Glover, USMC;
Capt. Philip Kovach, USMC

nose began an uncommanded right yaw. Capt. Kovach applied full left pedal with no effect as the yaw passed through 90-degrees to the right and accelerated.

Capt. Glover instinctively got on the controls to help. Capt. Kovach reduced both throttles to flight idle and began a hovering autorotation. The aircraft touched down after 180 degrees of right yaw. The close coordination of these two Marine Aviators ensured that the helo received minimal damage.

Postflight inspection revealed that a cam lock fastener had come loose and sheared the tail rotor driveshaft, causing a complete loss of tail rotor thrust.

LCdr. Bill McKown
Lt. Joe Mock
Lt. Ted Bennett
Lt. Eugene Rivers
Ltjg. Joe Colloca
VAW-115

Liberty 601 was on station at 19,000 feet during routine operations west of Subic Bay, the Philippines. As Lt. Mock (PAC) began a slow, left turn, the E-2C began a hard yaw to the right. Full left rudder by both pilots did not compensate. LCdr. McKown (PIC) took control as the aircraft decelerated through 150 knots, dropping at 2,500 fpm in a slip.

LCdr. McKown disengaged the autopilot, confirming it was not the problem. All the instruments showed normal indications. The pilots kept the rudders at the six-degree stops. Adding power slowed the descent rate, and LCdr. McKown began a long-way-round, right turn toward NAS Cubi.

Twenty degrees left angle-of-bank and a power reduction on the left engine helped the Hawkeye to steady up on the heading, but its airspeed dropped to near stall speed. LCdr. McKown lowered the nose to increase

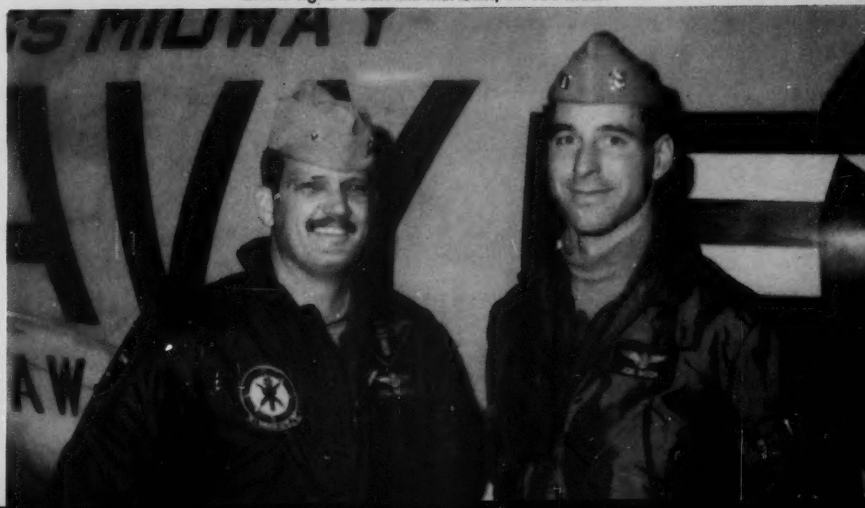
airspeed. At 15,000 feet, he told the crew to prepare to bail out, although he doubted he would also be able to exit since hands-on control was needed to keep the plane flying. However, as the pilots added more power to level off at 10,500, the aircraft became controllable, the aircrew relaxed from preparing to bailout, and Lt. Mock repressurized the aircraft.

With no TACAN bearing due to lockoff, a VAW-117 E-2C from USS *Enterprise* (CVN-65) provided a vector for Lt. Mock and LCdr. McKown. They closed on Cubi. Once inside 20 miles, the crew checked landing gear and flaps, and switched the rudders to 20-degrees throw, which instantly improved controllability.

The pilots maintained heading using full left rudder, left wing down, and differential power. Their primary concern was dragging the left wing on touchdown. NAS Cubi provided excellent control, bringing Liberty 601 to within sight of the runway. An LSO helped LCdr. McKown make an arrested landing.

Postflight inspection revealed the right outboard rudder had full starboard deflection caused by a disconnected feedback control-rod actuator. LCdr. McKown and Lt. Mock received Air Medals.

Left to right: LCdr. Bill McKown, Lt. Joe Mock





By Lt. Karl Darden

A Brief Encounter With Vertigo

24

NIGHT fam; good and dark. There was a quarter moon, but it wasn't doing us much good since it was behind us. The squadron had been having some difficulty with the doppler in a few of our H-3s, but I had flown this one recently, and it had shot a good approach.

About 10 miles out over the water, our first crewman armed a smoke and, on my signal, tossed it out. I flew the wind-line rescue pattern while my copilot called my rollout and punched the coupler button. The approach was excellent. When it was finished, I was in a 40-foot hover about 75 yards from the smoke. I gave the first crewman verbal control and asked him to direct me over it. That's when things started to happen.

Rather than keeping the smoke at my 3 o'clock position just outside the rotor arc, he talked me right on top of it, and I failed to realize it before it was too late. I slowed my 1-2-knot forward creep and tried to stabilize into a hover. It was impossible to concentrate with the bright light from the flare reflecting through the chin bubble. That's when I made my mistake.

I took my eyes off the gauges for what couldn't have been more than a second to see where the smoke was. The next thing I knew, I was rapidly moving back and left at 10 knots. That quick glance made me think I was moving forward and right too quickly, and I instantly put in an unnecessary correction. I could feel my scan start to break down, and I remember saying, "This isn't good."

I went right to my attitude gyro and got my wings level. My next priority was putting as much distance between the aircraft and the water as quickly as possible. I punched off the coupler and aborted the hover.

It wasn't what I would call a textbook departure. Since I was backing down to begin with, it took a few more seconds to gain forward ground speed. In fact, I made a vertical climb to 150 feet before my airspeed indicator read more than 30 knots. It resembled a free-stream recovery.

After stabilizing at 70 knots, I took another lap around to relax. The whole thing lasted maybe 10 seconds. I shot two more approaches, making sure to tell the first crewman where to posi-

tion the aircraft in relation to the smoke. My copilot made his three approaches, and we finished the hop without any other problems.

Later, I thought about the flight. First, as thorough as my brief was, it could have been better. Even though I got right on the gyro when I began having problems, I didn't do a good job of communicating my problem to my copilot. I should have been clearer, more definitive.

Second, my first crewman had just been qualified so it was his first chance to fly in that capacity. I didn't brief him on how to position the helo in relation to the smoke at night to avoid vertigo. I was so used to flying with experienced crewmen that I didn't check to see how much practice he had had with verbal control at night. My briefs will definitely include these procedures in the future.

Finally, I discovered how quickly vertigo can develop. Fortunately, I reacted quickly enough to depart the hover before things got too bad. It's important both pilots feel comfortable when waving off a maneuver. ◀

Lt. Darden is an H-3 pilot with HC-16.

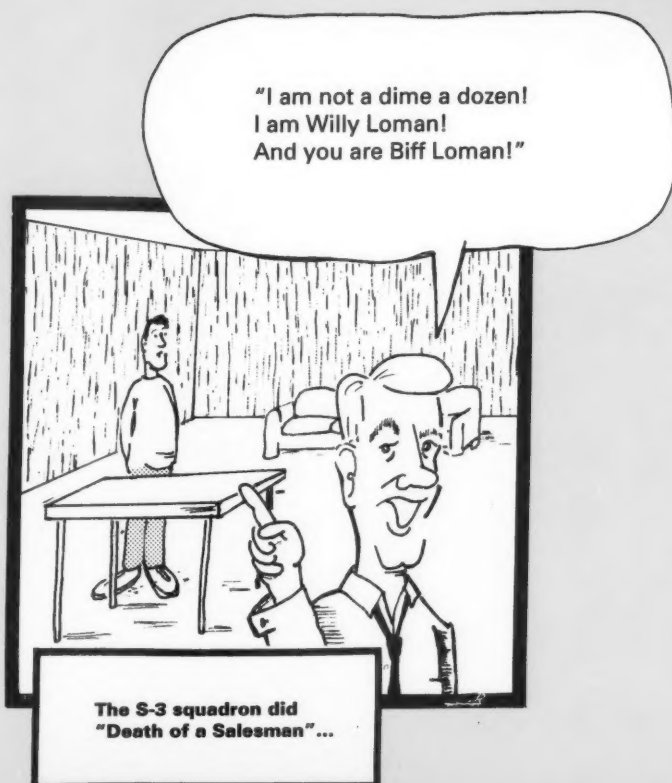
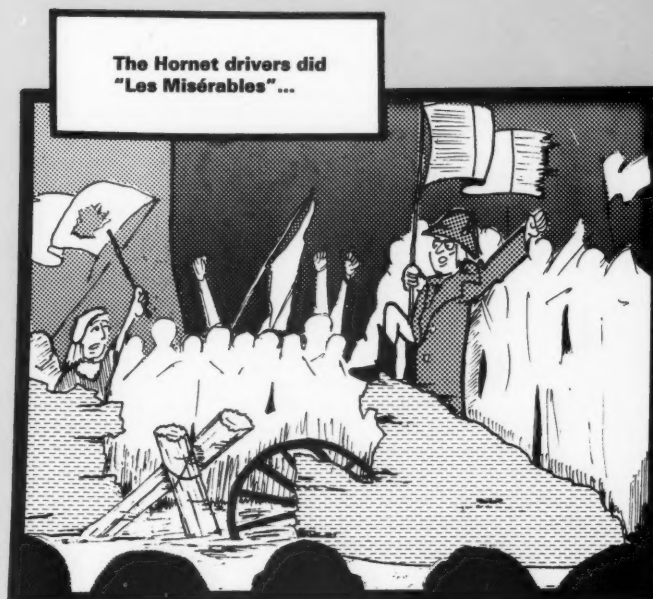
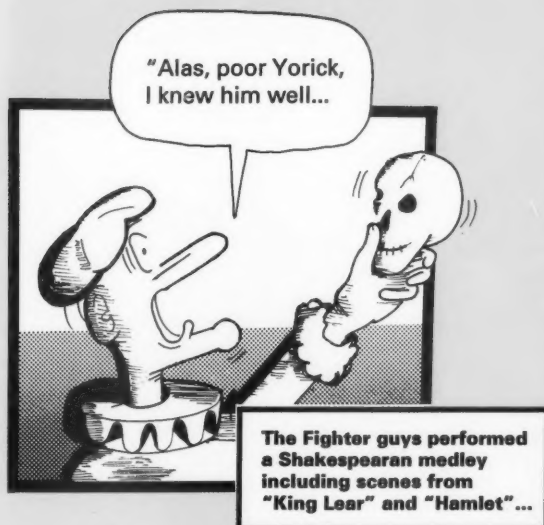
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BROWNSHOES IN ACTION COMIX

"The kind real aviators like"

By Lt. Ward Carroll

The air wing put big effort into the
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